UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/674,613	09/30/2003	Mukund Raghavachari	YOR920030229	4202

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EXAMINER
KARIKARI, KWASI

ART UNIT	PAPER NUMBER
2617	

NOTIFICATION DATE	DELIVERY MODE
10/06/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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PTOL-90A (Rev. 04/07)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2009*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,4-6,9-12 and 14-26* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,4-6,9-12 and 14-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☐ All   b)☐ Some *   c)☐ None of:

   1.☐ Certified copies of the priority documents have been received.

   2.☐ Certified copies of the priority documents have been received in Application No. _____.

   3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date *04/26/2010*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application
6)☐ Other: _____ .

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed on 09/03/2009, with respect to the rejection(s) of

claim(s) 1,4-6, 9-12 and 14-26 have been fully considered and are persuasive.

Therefore, the rejection has been withdrawn. However, upon further consideration, a

new ground(s) of rejection is made as shown below.

Information Disclosure Statement

2.   The information disclosure statement (IDS) submitted on 04/26/2010 is in

compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure

statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> e) the invention was described in (1) an application for patent, published under section 122(b), by
> another filed in the United States before the invention by the applicant for patent or (2) a patent
> granted on an application for patent by another filed in the United States before the invention by the
> applicant for patent, except that an international application filed under the treaty defined in section
> 351(a) shall have the effects for purposes of this subsection of an application filed in the United States
> only if the international application designated the United States and was published under Article 21(2)
> of such treaty in the English language.

Claims 1,4,6,9-12 and 15-26 are rejected under U.S.C. 102(e) as being anticipated

by Knauerhase et al., (U.S 2004/0203998), (hereinafter, Knauerhase).

Regarding claims 1 and 18, Knauerhase discloses an information handling

system/program (= service connectivity anticipation system/method, see [0003, 0014,

0017, 0022 and 0025]) comprising:

a wireless unit configured for moving within a network (= location and direction of

travel of mobile device, see [0018-19, 0026 and 0037]), said wireless unit comprising:

a location determining mechanism (= determine location of mobile device via

GPS and any known method, see [0021 and 0036]);

a transceiver; and an input/output interface (see [0029, 0039 and 0042]);

a wireless access point for facilitating contact between the wireless unit and the

network (= access point, see [0024]);

logic for determining: a target position for improved communication (=optimal

connection, see [0017, 0027 and 0031]) for the wireless unit based in part on

information representing a recent position of the wireless unit (= first/current location

and second location/traveling direction, see [0021-22 and 0025]) and based in part on

historical data on received signal strength at the recent and target positions (= service

availability at coverage map includes current position and traveling/"no service region

320", see [0025, 0027, 0030 and 0038-39; whereby the "current and historical data" is

being associated with the stored coverage map that includes information on service

availability at current location and traveling location);

a transmitter for transmitting directions to a user of the wireless unit to be

presented on the input/output interface, the directions including information directing the

user of the wireless unit to move the wireless unit to the target position for improved

reception (= mobile device warns/informs the user of potential change in service, see

[0027, 0031, 0033 and 0040]) wherein changing a position of the wireless unit from the

recent position to the target position is more likely to result in improved reception and

transmission of wireless signals to and from the wireless access point (see [0020, 0024,

0030-31 and 0038]; and

a database for storing information relating to position and related data on

wireless reception quality (see [0033, 0036 and 0040]) and wherein the information

stored based on historical data on received signal strength at the recent and target

positions is enhanced by information on an environment of the recent and target

positions (= accessing service map that links communication service coverage with

location, see [0022, 0025, 0027, 0031 and 0039]).

Regarding claim 4, as recited in claim 1, Knauerhase discloses the system, wherein

the logic for determining the target position comprises a mapping device for defining the

target position (= map information includes possible/future destination, see [0021-22

and 0025]).

Regarding claim 6, as recited in claim 1, Knauerhase discloses the system, wherein

the logic for determining the target position comprises an application specific integrated

circuit (= software that performs the determination method, see [0014, 0021-22 and

0025]).

Regarding claim 9, as recited in claim 1, Knauerhase discloses the system, wherein

the transceiver is configured for receiving information representing the recent position of

the wireless unit and for transmitting directions to the wireless unit, the directions

including information directing a user of the wireless unit to the target position (= mobile

device warns/informs the user of potential change in service, see [0027, 0031, 0033 and

0040]).

Regarding claim 10, Knauerhase discloses in a wireless network comprising access

points and wireless clients (see [0024]), a method for directing a user of a wireless client

to move the wireless client to a target position for improved communication (= service

connectivity anticipation system/method, see [0003, 0017, 0022 and 0025]), comprising:

activating a location-determining mechanism for determining a most recent

position of the wireless client (= determine location of mobile device via GPS and any

known method, see [0021 and 0036]), wherein the activating step is triggered in one of

two modes: automatic and fail-safe; wherein the automatic mode comprises constantly

seeking a stronger reception (= updates the presence information use to periodically

look ahead on service coverage/connectivity, see [0019-20, 0022, 0025 and 0031]);

wherein the fail-safe mode comprises activating the location-determining mechanism

only when the reception strength falls below a predetermined threshold (= movement of

device towards region where service may degrade, see [0020-21, 0027, 0033 and

0038]);

using a database comprising a history of communication quality at various

positions (see [0033, 0036 and 0040]);

using a wireless unit locator for determining, based on the history of

communication received signal strength at the most recent and target positions,

whether there exists the target position for improved communication between the

wireless client and the access point (= service availability at coverage map includes

current position and traveling/"no service region 320", see [0025, 0027, 0030 and 0038-

39; whereby the "current and historical data" is being associated with the stored

coverage map that includes information on service availability at current location and

traveling location);

using a transceiver for providing information to the wireless client, the information

comprising the target position and navigation directions to the target position(= mobile

device warns/informs the user of potential change in service, see [0027, 0031, 0033,

0038, 0040] and Fig. 1); and

sending an audio message comprising instructions indicating to the user of the

wireless unit how to get to the improved location (= mobile device warns/informs the

user of potential change in service; and display device 530 may be or may include an

auditory device, such as a speaker for providing auditory information, see [0021, 0027,

0031, 0033, 0040 and 0042]).

Regarding claim 11, as recited in claim 10, Knauerhase discloses the method, wherein

the step of determining the most recent position of the wireless client further comprises

receiving a global positioning system signal (=GPS, [0021-22 and 0025]).

Regarding claim 12, as recited in claim 10, Knauerhase discloses the method, wherein

the step of sending information to the user of the wireless client further comprises at

least one step from among the steps of: providing a map illustrating a route to the target

position; providing a text message comprising navigation instructions to the target

position; and providing a video message comprising navigation instructions to the target

position (= access service coverage map, see [0021-22, 0025 and 0039]).

Regarding claim 15, as recited in claim 10, Knauerhase discloses the method, wherein

the step of providing information comprises providing information relating to target

positions within a destination area provided by the wireless client (= map information

includes possible/future destination, see [0021-22 and 0025]).

Regarding claim 16, as recited in claim 10, Knauerhase discloses the method, wherein

the information provided to the user of the wireless client is based on data relating to the

wireless client's most recent position, direction and velocity (= speed/location, see [0025

and 0038-39]).

Regarding claim 17, as recited in claim 10, Knauerhase discloses the method, wherein

the step of determining the wireless client's most recent position comprises using

triangulation (= GPS, see [0021]).

Regarding claim 19, as recited in claim 18, Knauerhase discloses that the computer

program product , further comprising computer program code for receiving a global

positioning system signal (=GPS, [0021-22 and 0025]).

Regarding claim 20, as recited in claim 19, Knauerhase discloses the computer

program product, wherein the computer program code for providing directions further

comprise at least one instruction from among the instructions: providing a map

illustrating a route to the target position; providing a text message comprising navigation

instructions to the target position; and providing a video message comprising navigation

instructions to the target position (= access service coverage map, see [0021-22, 0025

and 0039]).

Regarding claim 21, as recited in claim 18, Knauerhase discloses that the computer

program product , further comprising computer program code using information on the

most recent location, direction, and velocity of the wireless client to project the target

position for the wireless client where improved communication is likely(= speed/location,

see [0025 and 0038-39]).

Regarding claim 22, Knauerhase discloses a wireless telecommunication unit

(= mobile device, see [0024]), comprising:

processor logic (= processor 510, see Fig. 5) for determining, based on historical

data on received signal strength at a recent position and a target position of the wireless

telecommunication unit, the target position for improved reception for the wireless

telecommunication unit based in part on information representing the recent position of

the wireless unit (= service availability at coverage map includes current position and

traveling/"no service region 320", see [0025, 0027, 0030 and 0038-39; whereby the

"current and historical data" is being associated with the stored coverage map that

includes information on service availability at current location and traveling location),

wherein changing the position of the wireless unit from the recent position to the target

position is more likely to result in improved reception of wireless signals from a wireless

access point (see [0020, 0024, 0030-31 and 0038]); and

a transmitter for transmitting to a user of the wireless unit directions to move the

wireless unit to said target location (= mobile device warns/informs the user of potential

change in service, see [0027, 0031, 0033, 0038 and 0040]);

a database for storing information relating to position and related data on

wireless reception quality(see [0033, 0036 and 0039-40]), and wherein the information

stored based on historical data on received signal strength at the recent and target

positions is enhanced by information on an environment of the recent and target

positions (= service availability at coverage map includes current position and

traveling/"no service region 320", see [0025, 0027, 0030 and 0038-39; whereby the

"current and historical data" is being associated with the stored coverage map that

includes information on service availability at current location and traveling location);

a user interface for presenting the directions; and a transceiver for receiving and

transmitting the wireless signals (= mobile device warns/informs the user of potential

change in service; and display device 530 may be or may include an auditory device,

such as a speaker for providing auditory information, see [0021, 0027, 0031, 0033,

0040, 0042] and Fig. 1).

Regarding claim 23, as recited in claim 22, Knauerhase discloses that the wireless

telecommunication unit, further comprising a global positioning system (= GPS, see

[0021]).

Regarding claim 24, as recited in claim 22, Knauerhase discloses the wireless

telecommunication unit, wherein the processor logic comprises a programmable

processor and program instructions (= software that performs the determination method,

see [0014, 0021-22, 0025 and 0041]).

Regarding claim 25, as recited in claim 22, Knauerhase discloses the wireless

telecommunication unit, wherein the processor logic comprises an application-specific

integrated circuit (= software that performs the determination method, see [0014, 0021-

22, 0025 and 0041]).

Regarding claim 26, as recited in claim 22, Knauerhase discloses that the wireless

telecommunication unit, further comprising a database storing information relating to

position and related data on wireless reception quality at the recent and target positions

(= accessing service map that links communication service coverage with location, see

[0017, 0022, 0025, 0027, 0031 and 0039]).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this
> title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a
> whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said
> subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

> This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the
> examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered
> therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out
> the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order
> for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35
> U.S.C. 103(a).

> The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for
> establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

>   1.   Determining the scope and contents of the prior art.

>   2.   Ascertaining the differences between the prior art and the claims at issue.

>   3.   Resolving the level of ordinary skill in the pertinent art.

>   4.   Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 5 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Knauerhase in view of Carter et. al., (U.S. 2004/0152362), (hereinafter, Carter)

Regarding claim 5, as recited in claim 1, **Knauerhase** explicitly fails to disclose: the

system, wherein database is dynamically updateable based on reception strength input

received from a plurality of wireless units.

However, **Carter**, which is an analogous art, equivalently teaches: "system, wherein database is dynamically updateable based on reception strength input received from a plurality of wireless units" (= collection of data from authorized user who are in the network, as event occurs, see [0038, 0040 and 0054]).

Therefore, it would have been obvious at the time the invention was made for one of the ordinary skill in the art to have combined the teaching of Carter with Knauerhase for the benefit of providing a cheaper data collection process whereby data is collected by authorized users who are in the communication system, thereby eliminating dedicated and expensive data collection equipments from the process.

Regarding claim 14, as recited in claim 10, **Knauerhase** explicitly fails to disclose: "dynamically updating the database dynamically as new data on communication quality are determined".

However, **Carter,** which is an analogous art, equivalently teaches: "dynamically updating the database dynamically as new data on communication quality are determined" (= collection of data from authorized user who are in the network, as event occurs, see [0038, 0040 and 0054]).

Therefore, it would have been obvious at the time the invention was made for one of the ordinary skill in the art to have combined the teaching of Carter with Knauerhase for the benefit of providing a cheaper data collection process whereby data is collected by authorized users who are in the communication system, thereby

eliminating dedicated and expensive data collection equipments from the process.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure.

a.   Joseph (US. 7,197,320) teaches a system for managing traffic patterns using

cellular telephones.

b.   Jha (U.S 7,251,491) teaches a system of and method for using position, velocity,

or direction of motion estimates to support handover decisions .

c.   Nazari (U.S 2005/0025181) teaches a service advisor .

6.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kwasi Karikari whose telephone number is 571-272-8566. The examiner can normally be reached on M-T (7am - 5pm).
        If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Appiah can be reached on 571-272-7904. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8566. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Kwasi Karikari/
Patent Examiner (PSA): Art Unit 2617.